

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of the claims in the application.

Listing of Claims:

1. (Currently Amended) A method to inhibit allergen-induced airway hyperresponsiveness in a mammal, comprising administering to a mammal a CGRP agent selected from the group consisting of: calcitonin gene related peptide (CGRP); a fragment of CGRP that is an agonist of CGRP, wherein the fragment binds to and activates a CGRP receptor with CGRP biological activity; and a homologue of CGRP that is an agonist of CGRP, wherein the homologue binds to and activates a CGRP receptor with CGRP biological activity;

wherein said mammal has, or is at risk of developing, allergen-induced airway hyperresponsiveness, and wherein administration of said agent inhibits allergen-induced airway hyperresponsiveness in said mammal as compared to in the absence of administration of said agent.

2. (Cancelled)

3. (Previously Presented) The method of Claim 1, wherein said mammal has been sensitized to an allergen and has been exposed to, or is at risk of being exposed to, an amount of said allergen that is sufficient to induce airway hyperresponsiveness (AHR) in said mammal in the absence of said agent.

4. (Original) The method of Claim 1, wherein said method further comprises monitoring said mammal to detect whether AHR in said mammal is inhibited, wherein if AHR is detected in said mammal, additional amounts of said agent are administered until AHR is not detected in said mammal.

5. (Original) The method of Claim 1, wherein said agent is administered within a time period of between 48 hours or less prior to exposure to an AHR provoking stimulus that is sufficient to induce AHR, and within 48 hours or less after the detection of the first symptoms of AHR.

6. (Original) The method of Claim 1, wherein said agent is administered upon the detection of the first symptoms of AHR.

7. (Original) The method of Claim 1, wherein said agent is administered within 1 hour after the detection of the first symptoms of AHR.

8. (Original) The method of Claim 1, wherein said agent is administered within 12 hours or less prior to exposure to a AHR provoking stimulus that is sufficient to induce AHR.

9. (Original) The method of Claim 1, wherein said agent is administered within 2 hours or less prior to exposure to a AHR provoking stimulus that is sufficient to induce AHR.

10. (Original) The method of Claim 1, wherein said agent is administered to said mammal every one to two days.

11. (Cancelled)

12. (Original) The method of Claim 1, wherein said agent is administered at a dose of from about $0.1 \mu\text{g} \times \text{kilogram}^{-1}$ and about $20 \mu\text{g} \times \text{kilogram}^{-1}$ body weight of said mammal.

13. (Original) The method of Claim 1, wherein said agent is administered at a dose of from about $0.1 \mu\text{g} \times \text{kilogram}^{-1}$ and about $10 \mu\text{g} \times \text{kilogram}^{-1}$ body weight of said mammal.

14. (Original) The method of Claim 1, wherein said agent is administered at a dose of from about $0.1 \mu\text{g} \times \text{kilogram}^{-1}$ and about $5 \mu\text{g} \times \text{kilogram}^{-1}$ body weight of said mammal.

15. (Cancelled)

16-19. (Cancelled)

20. (Original) The method of Claim 1, wherein said agent is targeted to cells in the lung of said mammal selected from the group consisting of smooth muscle cells and epithelial cells.

21. (Original) The method of Claim 1, wherein said agent is administered by direct delivery of said agent to the lung of said mammal.

22. (Original) The method of Claim 1, wherein said agent is administered by aerosol delivery.

23. (Original) The method of Claim 1, wherein said agent is administered by parenteral delivery.

24. (Original) The method of Claim 1, wherein said agent is administered by oral delivery.

25. (Original) The method of Claim 1, wherein administration of said agent reduces the airway hyperresponsiveness of said mammal such that the FEV₁ value of said mammal is improved by at least about 5%.

26. (Original) The method of Claim 1, wherein administration of said agent prevents airway hyperresponsiveness in said mammal when administered prior to exposure of said mammal to a AHR provoking stimulus that is sufficient to induce AHR.

27. (Previously Presented) The method of Claim 1, wherein said agent is administered to said mammal in conjunction with another agent selected from the group consisting of: corticosteroids, (oral, inhaled and injected), β -agonists (long or short acting), leukotriene modifiers (inhibitors or receptor antagonists), antihistamines, phosphodiesterase inhibitors, sodium cromoglycate, Nedocromil, and theophylline.

28. (Original) The method of Claim 1, wherein said agent is administered to said mammal in conjunction with a CGRP receptor activity modifying protein (RAMP).

29. (Original) The method of Claim 1, wherein said agent is administered in a pharmaceutically acceptable excipient.

30. (Original) The method of Claim 1, wherein said mammal is a human.

31-37. (Cancelled)

38. (Previously Presented) The method of Claim 1, wherein said agent is CGRP.

39. (Currently Amended) The method of Claim 1, wherein said agent is a fragment of CGRP that is a CGRP agonist, wherein the fragment binds to and activates a CGRP receptor ~~with CGRP biological activity.~~

40. (Currently Amended) The method of Claim 1, wherein said agent is a homologue of CGRP that is a CGRP agonist, wherein the homologue binds to and activates a CGRP receptor with CGRP biological activity.

41. (Cancelled)

42. (Previously Presented) The method of Claim 1, wherein said agent binds to and activates a CGRP receptor in the lungs of the mammal.

43. (New) The method of Claim 1, wherein administration of said agent inhibits allergen-induced airway hyperresponsiveness in said mammal with statistical significance ($p \leq 0.05$) as compared to in the absence of administration of said agent.

44. (New) The method of Claim 1, wherein the agent is human α CGRP.

45. (New) A method to inhibit allergen-induced airway hyperresponsiveness in a mammal, comprising administering to a mammal a calcitonin gene related peptide (CGRP), wherein said mammal has, or is at risk of developing, allergen-induced airway hyperresponsiveness, and wherein administration of said CGRP inhibits allergen-induced airway hyperresponsiveness in said mammal as compared to in the absence of administration of said CGRP.

46. (New) A method to inhibit allergen-induced airway hyperresponsiveness in a mammal, comprising administering to a mammal a CGRP agent selected from the group consisting of: calcitonin gene related peptide (CGRP); a fragment of CGRP that is a CGRP agonist, wherein the fragment binds to and activates a CGRP receptor; and a homologue of CGRP that is a CGRP agonist, wherein the homologue binds to and activates a CGRP receptor;

wherein said mammal has, or is at risk of developing, allergen-induced airway hyperresponsiveness in response to a concentration of a provoking agent that causes a 20% fall in FEV_1 ($PC_{20}FEV_1$), wherein said concentration is less than the concentration required to cause a 20% fall in FEV_1 ($PC_{20}FEV_1$) in non-allergen-sensitized mammals; and

wherein administration of said CGRP agent inhibits allergen-induced airway hyperresponsiveness induced by said concentration of provoking agent in said mammal as compared to in the absence of administration of said CGRP agent.

47. (New) A method to inhibit allergen-induced airway hyperresponsiveness in a mammal, comprising administering to a mammal a CGRP agent selected from the group consisting of: calcitonin gene related peptide (CGRP); a fragment of CGRP that is an agonist of CGRP, wherein the fragment has substantially the same or increased biological activity as compared to a naturally occurring CGRP peptide; and a homologue of CGRP that is an agonist of CGRP, wherein the homologue has substantially the same or increased biological activity as compared to a naturally occurring CGRP peptide;

wherein said mammal has, or is at risk of developing, allergen-induced airway hyperresponsiveness; and

wherein administration of said agent inhibits allergen-induced airway hyperresponsiveness in said mammal as compared to in the absence of administration of said agent.